406. *By William Hoover, A. M. Dayton, Ohio.*—Find x from the eq'n

$$\cot 2^{x-1}a - \cot 2^x a = \operatorname{cosec} 3a.$$

407. *By Henry Heaton, Lewis, Iowa.*—Evaluate

$$\int_0^{\frac{\pi}{2}} \left(1+\cos^4\theta\right)^{\frac{1}{2}} d\theta.$$

408. *By W. E. Heal.*—Two points, one on each of two confocal ellipsoids, are said to correspond if

$$\frac{x}{a} = \frac{X}{A}, \quad \frac{y}{b} = \frac{Y}{B}, \quad \frac{z}{c} = \frac{Z}{C}.$$

Prove that the distance between two points, one on each of two confocal ellipsoids is equal to the distance bet. the corresp. points. (Ivory's Th.)

PUBLICATIONS RECEIVED.

Logarithms. By H. N. WHEELER. Used at Harvard College in connect'n with Wheeler's. Trigonometry and Peirce's Logarithm Tables. 43 pages. Cambridge: 1882.

The Multisector and Polyode. (Pamphlet.) By J. W. NICHOLSON, A. M., Baton Rouge, La. The Multisector is an instrument devised for drawing a curve, the "Polyode", by which an angle is not only trisected but may be divided into any number of equal parts.

New, simple and Complete Demonstration of the Binomial Theorem and Logarithmic Series. By J. W. NICHOLSON, M. A.

Newcomb's Mathematical Course:
Elements of Geometry; 399 pages. New York: Henry Holt & Co. 1881:
A School Algebra; 279 pages:
Algebra for Schools and Colleges; 474 pages. New York: Henry Holt & Co. By PROFESSOR SIMON NEWCOMB, U. S. Navy.

Professor Newcomb is so well, and favorably, known as a writer, that any commendation of these books is unnecessary. It is sufficient to say that the Public expect from this author nothing below *first class* productions, and that they will not be disappointed in these books.

ERRATA.

On page 65, line 12, for "weights" read masses.
" " 91, " 10, 11 and 14, change last sign from — to +.
" " 93, for "S" and "P" on line AB of Fig., read F and F', and for "x", at foot of perp. from D, read S.
" " 94, line 19 from bottom, for "division", read divisors.
" " 110, " 17, for "equation of motion", read equations, &c.
" " " " 20, for "*Celestium*" read *Cœlestium.*